

REMARKS/ARGUMENTS

Claims 1-22 are pending.

The Examiner has acknowledged Applicants' priority claim, Request for Continued Application, and Preliminary Amendment in the Office Action dated May 22, 2003. Certain objections have been made to the drawings in the PTO-948. Applicants have submitted substitute drawings, which should overcome the Examiner's objections.

Claims 19 and 22 were rejected under 35 U.S.C. 112, first paragraph. Applicants respectfully disagree with the Examiner's rejection. However, Applicant has amended the claim to recite a silicon substrate having "a single crystal orientation," which includes 100 crystal orientation and others. The single crystal orientation is described throughout the present specification and covers all types of crystal orientations. Accordingly, the rejection to claims 19 and 22 are now moot.

The Examiner has rejected claim 21 under 35 U.S.C. 112, second paragraph. As noted above, claim 21 has been amended for clarification purposes only without limiting the scope of such claim. Accordingly, claim 21 overcomes the rejection.

Claims 1-2, 5-6, and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Sato et al. Such claims have been amended to more clearly illustrate the invention. In particular, the Examiner has indicated that Sato illustrated the elements of claim 1. Clearly, Sato fails to show or suggest applying a combination of a deposition species for deposition of a deposition material and an etching species for etching an etchable material during a time that the non-uniform surface is subjected to etching in the manner claimed. Although the Examiner notes certain sections of Sato including column 4 lines 48-60 and column 9 line 57 through column 10 line 12, such sections do not show or suggest the invention of claim 1 in the manner claimed. Additionally, Sato also fails to show or suggest that the combination of the deposition species and the etching species contacts the non-uniform surface in a thermal setting to reduce a level of non-uniformity of the non-uniform surface by filling a portion of the defects to smooth the film of material, which is substantially free from the defects and being characterized by a surface roughness of a predetermined value. Accordingly, claim 1 is patentable over Sato.

Additionally, claims 2, 5-6, and 7-19 are also patentable. These claims are at least patentable over Sato for the reasons noted as well as other reasons. The Examiner also rejected claims 3-4 under 35 U.S.C. 103(a) as being unpatentable over Sato and Wolf. Again, claims 3 and 4 are at least patentable over Sato and Wolf for the reasons noted as well as others. Accordingly, all dependent claims 2-19 are patentable over Sato and any combination of Wolf.

Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato. Here, the Examiner merely relies upon hindsight arguments to indicated the obviousness of claim 20. Clearly, Sato does not show or suggest a method of fabricating substrates as recited by claim 20. The method includes providing a substrate comprising a film of material with a non-uniform surface, which has a plurality of defects, at least some of the defects being 100 Angstroms or greater. The method also includes applying simultaneously to the non-uniform surface a combination of a silicon-containing-deposition species for deposition of a deposition material and a halogen-containing-etching species for etching an etchable material in order to smooth the surface. Applicants argue that an unexpected result was the claimed etchable material that became smooth in the manner claimed. The smooth film can be defined as, for example, being less than 2 nanometers root mean square, which is unexpected using a combination of deposition and etching in the manner claimed. At best, Sato taught heat treatment using a hydrogen rather than an etching species and a deposition species in the manner claimed. Accordingly, claim 20 is patentable. Dependent claims 21-22 are also patentable for these reasons as other. Accordingly, all claims 20-22 are patentable.

CONCLUSION


In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

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PATENT

Respectfully submitted,



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